Message

From: Fry, Jessica [fry.jessica@epa.gov]
Sent: 11/7/2019 2:33:54 PM
To: Chow, Alice [chow.alice@epa.gov]
Subject: RE: EtO WV updated air dispersion modeling
Attachments: Risk by Process_2017 Emissions.xlsx

Hi Renu,

Here is a file containing the breakdown of the cancer risk/modeled concentration for each process that was modeled at the three facilities. This is an output from the HEM-3 model. I've included a tab in the spreadsheet for each model run and also a tab that shows a crosswalk for the source ID vs the process/unit ID for each facility from the emissions inventory system (EIS) data.

As a follow up to the information that was sent earlier this week, the airport meteorological data that was used in the model was from 2016, and the NCORE meteorological data used was from 2018. Just one year of meteorological data was for the model runs.

Please let me know if you have any other questions.

Thanks,
Jessica

From: Chakrabarty, Renu M <Renu.M.Chakrabarty@wv.gov>
Sent: Monday, November 4, 2019 11:43 AM
To: Fry, Jessica <fry.jessica@epa.gov>
Cc: McClung, Jon D <Jon.D.McClung@wv.gov>; Chow, Alice <chow.alice@epa.gov>; Bin.Z.Schmitz@wv.gov; Crowder, Laura M <laura.m.crowder@wv.gov>
Subject: RE: EtO WV updated air dispersion modeling

Hi Jessica,

Thank you for your modeling efforts. I know you have been working to update EtO information for the WV hotspot facilities.

We are having an internal meeting this Wed. afternoon regarding the UCC/DOW Institute facility with our Director (Laura) and one of our Deputy Cabinet Secretaries, and are preparing for a meeting with the company later in the week.

It would be very helpful to have Region 3's updated dispersion modeling for our internal meeting on Wednesday, if that is at all possible.

Thank you,
Renu

From: Schmitz, Bin Z <Bin.Z.Schmitz@wv.gov>
Sent: Wednesday, October 30, 2019 3:53 PM
To: Fry, Jessica <fry.jessica@epa.gov>
Cc: Chakrabarty, Renu M <Renu.M.Chakrabarty@wv.gov>; McClung, Jon D <Jon.D.McClung@wv.gov>; Chow, Alice <chow.alice@epa.gov>
Subject: RE: EtO WV updated air dispersion modeling

Hi Jessica,

Thank you for the prompt reply.

We hope to receive the input files for AERMOD, so that WVDAQ modelers can review and evaluate the ambient air concentration of EtO predicted by AERMOD. In the meanwhile, if there are input files/parameters regarding human exposure pattern and health effects that were used by EPA in HEM -3 to predict the cancer risk, we would like to have them as well.

Thanks,

Bin

Bin Z. Schmitz
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From: Fry, Jessica <fry.jessica@epa.gov>
Sent: Friday, October 25, 2019 8:04 AM
To: Schmitz, Bin Z <Bin.Z.Schmitz@wv.gov>
Cc: Chakrabarty, Renu M <Renu.M.Chakrabarty@wv.gov>; McClung, Jon D <Jon.D.McClung@wv.gov>; Chow, Alice <chow.alice@epa.gov>
Subject: RE: EtO WV updated air dispersion modeling

Hi Bin,

Thank you for your email, here is a some information regarding EPA's EtO modeling. We used EPA's Human Exposure Model (HEM-3) to model the EtO risk from the facilities in West Virginia. This is the model that is used by for estimating ambient concentrations, human exposures and health risks for EPA's National Air Toxics Assessment. AERMOD is run within the HEM-3 model, with the user supplying the stack parameters and emission locations. We did not run building information, because we did not have that information to input into the model, which is a caveat to the modeling we have performed. Here is a link to the HEM-3 Model that is used:

https://www.epa.gov/fera/risk-assessment-and-modeling-human-exposure-model-hem

We should be finishing up our model runs with the 2017 NEI emissions data, as well as the meteorological data from West Virginia's NCORE monitoring site next week, and will be able to provide you with the files at that time.

Please let me know if you have additional questions.

Thank you,
Jessica

From: Schmitz, Bin Z <Bin.Z.Schmitz@wv.gov>
Sent: Thursday, October 24, 2019 3:43 PM

To: Fry, Jessica <fry.jessica@epa.gov>
Cc: Chakrabarty, Renu M <Renu.M.Chakrabarty@wv.gov>; McClung, Jon D <Jon.D.McClung@wv.gov>
Subject: EtO WV updated air dispersion modeling

Hi Jessica,

This message is regarding updated EtO air dispersion modeling EPA Region 3 was working on for the Union Carbide/DOW facility in Institute, WV. Renu Chakrabarty indicated that EPA Region 3 was updating the emissions inputs as well as the met data. As part of our agency's review and evaluation of this facility's EtO emissions, we'd like to request the updated modeling input files that were used by the EPA's modeler to determine maximum individual risk (MIR) for cancer at the three facilities in WV. And, the updated results, if those are available.

Per WVDAQ modeler Mr. McClung, Jon, the following information would be necessary for AERMOD input file:

- BPIP input file for building downwash information – building dimensions and coordinates
- Meteorological data – AERMINTUE input/output files, ISHD hourly input files, upper air data, AERMET input/output files – demonstration of meteorological data representativeness
- AERSURFACE input/output data with precipitation supporting data
- AERMAP – receptor domain information and input/output files and receptor locations, elevations, and hill height scales
- Boundary/property line of facility to determine ambient air

Thank you,
Bin

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